

What is claimed is:

1. A solid laser apparatus having a semiconductor laser for emitting a laser beam, a microchip laser crystal arranged for being excited by the laser beam emitted from the semiconductor laser and provided with its crystal end faces coated for use as an optical resonator, a nonlinear optical device for receiving a laser beam from the microchip laser crystal and emitting its harmonic light, an optical detecting means used as a monitor for detecting the intensity of the light emitted from the nonlinear optical device, and an output control circuit for driving the semiconductor laser so as to maintain the intensity of the light at a predetermined level, wherein

the output control circuit includes a lowpass filter and a highpass filter.

2. A solid laser apparatus according to claim 1, wherein the cutoff frequency of the highpass filter is arranged higher than the cutoff frequency of the lowpass filter.

3. A solid laser apparatus having a semiconductor laser for emitting a laser beam, a microchip laser crystal arranged for being excited by the laser beam emitted from the semiconductor laser and provided with its crystal end faces coated for use as an optical resonator, a nonlinear optical device for receiving the laser beam from the microchip laser crystal and emitting its harmonic light, an optical detecting means used as a monitor for detecting the intensity of the light emitted from the nonlinear optical device, and an output control circuit for driving the semiconductor laser so as to maintain

the intensity of the light at a predetermined level, wherein

the output control circuit includes a bandpass filter of which the center frequency is arranged higher than the relaxation oscillating frequency of the solid laser apparatus.

4. A solid laser apparatus having a semiconductor laser for emitting a laser beam, a nonlinear optical device for receiving a laser beam from the semiconductor laser and emitting its harmonic light, an optical detecting means used as a monitor for detecting the intensity of the light emitted from the nonlinear optical device, and an output control circuit for driving the semiconductor laser so as to maintain the intensity of the light at a predetermined level, wherein

the output control circuit includes a lowpass filter and a highpass filter.

5. A solid laser apparatus according to claim 4, wherein the cutoff frequency of the highpass filter is arranged higher than the cutoff frequency of the lowpass filter.

6. A solid laser apparatus having a semiconductor laser for emitting a laser beam, a nonlinear optical device for receiving a laser beam from the semiconductor laser and emitting its harmonic light, an optical detecting means used as a monitor for detecting the intensity of the light emitted from the nonlinear optical device, and an output control circuit for driving the semiconductor laser so as to maintain the intensity of the light at a predetermined level, wherein

the output control circuit includes a bandpass filter of which the center frequency is arranged higher than the relaxation oscillating frequency of the solid laser apparatus.

7. A solid laser apparatus having a semiconductor laser for emitting a laser beam, a microchip laser crystal arranged for being excited by the laser beam emitted from the semiconductor laser and provided with its crystal end faces coated for use as an optical resonator, a nonlinear optical device for receiving a laser beam from the microchip laser crystal and emitting its harmonic light, an optical detecting means used as a monitor for detecting the intensity of the light emitted from the nonlinear optical device, and an output control circuit for driving the semiconductor laser so as to maintain the intensity of the light at a predetermined level, wherein

the output control circuit includes a phase shift circuit for advancing the phase of a signal in the vicinity of the relaxation oscillating frequency of the solid laser apparatus.

8. A solid laser apparatus having a semiconductor laser for emitting a laser beam, a nonlinear optical device for receiving a laser beam from the semiconductor laser and emitting its harmonic light, an optical detecting means used as a monitor for detecting the intensity of the light emitted from the nonlinear optical device, and an output control circuit for driving the semiconductor laser so as to maintain the intensity of the light at a predetermined level, wherein

the output control circuit includes a phase shift circuit for advancing the phase of a signal in the vicinity of the relaxation oscillating frequency of the solid laser apparatus.

9. A solid laser apparatus having a semiconductor laser for emitting a laser beam, a microchip laser crystal arranged for being excited by the laser beam emitted from the semiconductor laser and provided

with its crystal end faces coated for use as an optical resonator, a nonlinear optical device for receiving a laser beam from the microchip laser crystal and emitting its harmonic light, an optical detecting means used as a monitor for detecting the intensity of the light emitted from the nonlinear optical device, and an output control circuit for driving the semiconductor laser so as to maintain the intensity of the light at a predetermined level, wherein

the output control circuit includes a pseudo notch filter of which gain is arranged to have a local minimum at the relaxation oscillating frequency and not zero at the notch frequency.

10. A solid laser apparatus having a semiconductor laser for emitting a laser beam, a nonlinear optical device for receiving a laser beam from the semiconductor laser and emitting its harmonic light, an optical detecting means used as a monitor for detecting the intensity of the light emitted from the nonlinear optical device, and an output control circuit for driving the semiconductor laser so as to maintain the intensity of the light at a predetermined level, wherein

the output control circuit includes a pseudo notch filter of which gain is arranged to have a local minimum at the relaxation oscillating frequency and not zero at the notch frequency.